

Population Health as a Corporate Strategy

The Value of Investing in Wellness



Dixon Thayer
Co-founder
CEO



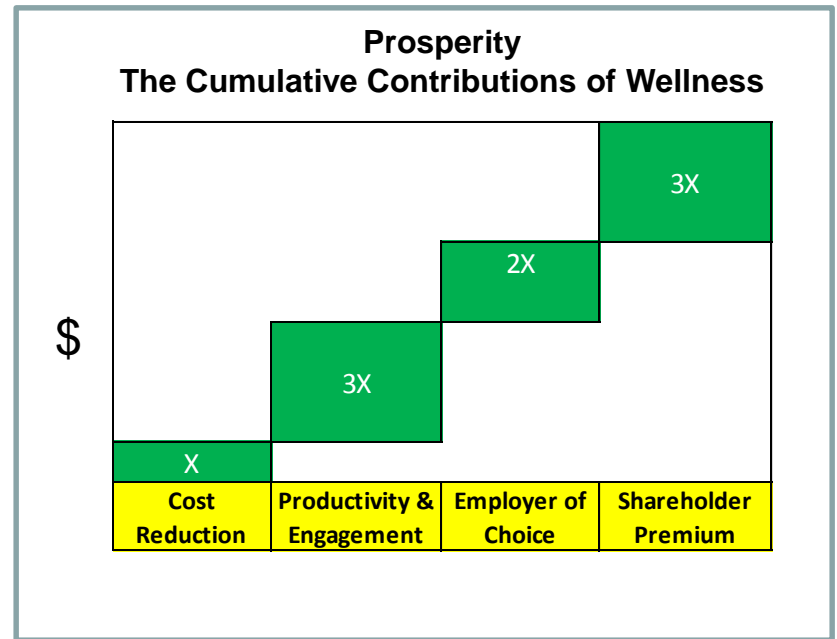
August 6, 2013



Ray Fabius MD
Co-founder
President

The Value of Investing in Wellness

- Medical Cost Reductions
- Productivity Gains
- Employee Engagement
- Employer of Choice
- Return to Investors



- Prosperity; the Connection Between Health & Wealth

Medical Cost Reductions

- JNJ Benchmark Research in Health Affairs
- Truven Large Employer Database Study
- Thomson Reuters Whitepaper
 - A Path to Eliminating \$3.6 Trillion in Wasteful Healthcare Spending
- The Medically Homeless
- Keeping Well People Well



Johnson & Johnson

Demonstrates a Sustainable Culture of Health

WELLNESS

By Rachel M. Henke, Ron Z. Goetzel, Janice McHugh, and Fik Isaac

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HEALTH AFFAIRS 30,
NO. 3 (2011): 490-499
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The People-to-People Health
Foundation, Inc.

Recent Experience In Health Promotion At Johnson & Johnson: Lower Health Spending, Strong Return On Investment

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Janice McHugh is manager of integrated health services at Johnson & Johnson, in New Brunswick, New Jersey.

Fik Isaac is executive director of global health services at Johnson & Johnson and chief medical officer, Wellness & Prevention, Inc.—Johnson & Johnson.

ABSTRACT Johnson & Johnson Family of Companies introduced its worksite health promotion program in 1979. The program evolved and is still in place after more than thirty years. We evaluated the program's effect on employees' health risks and health care costs for the period 2002–08. Measured against similar large companies, Johnson & Johnson experienced average annual growth in total medical spending that was 3.7 percentage points lower. Company employees benefited from meaningful reductions in rates of obesity, high blood pressure, high cholesterol, tobacco use, physical inactivity, and poor nutrition. Average annual per employee savings were \$565 in 2009 dollars, producing a return on investment equal to a range of \$1.88—\$3.92 saved for every dollar spent on the program. Because the vast majority of US adults participate in the workforce, positive effects from similar programs could lead to better health and to savings for the nation as a whole.

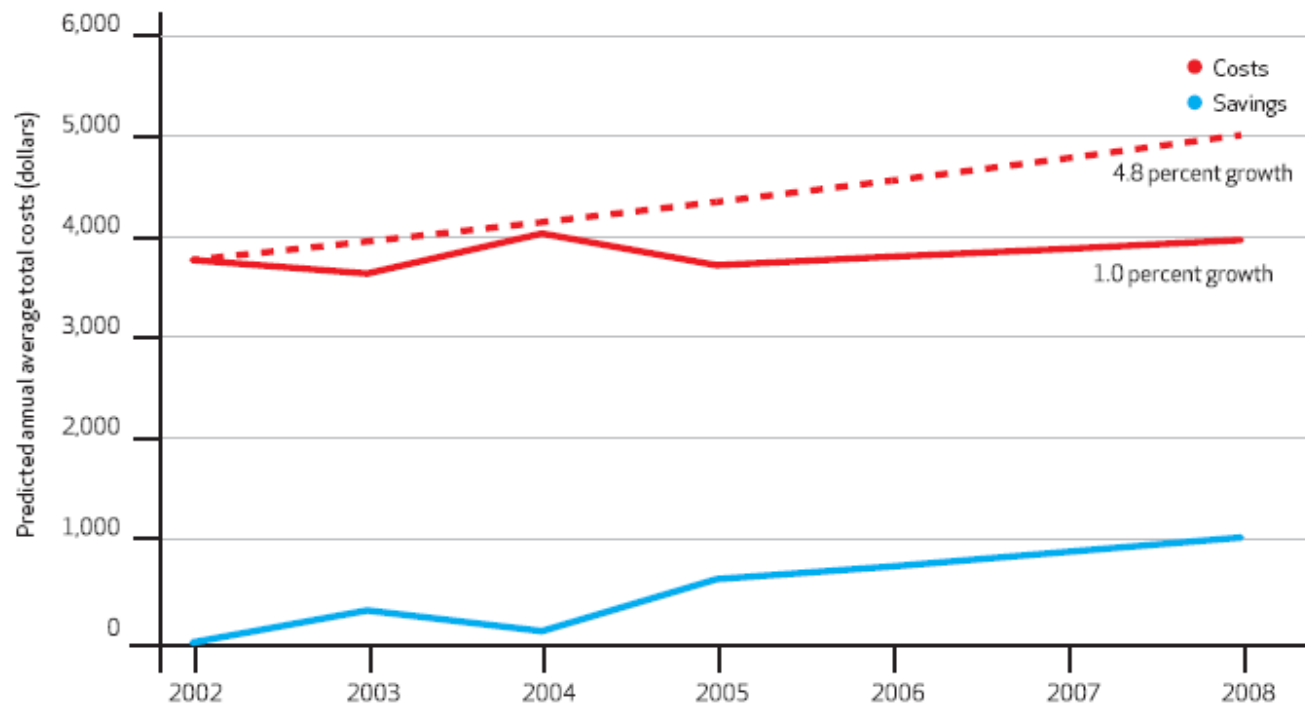
A Culture of Health

HealthNEXT

Only Known Sustainable Method to Bend Health Care Cost Curve

EXHIBIT 2

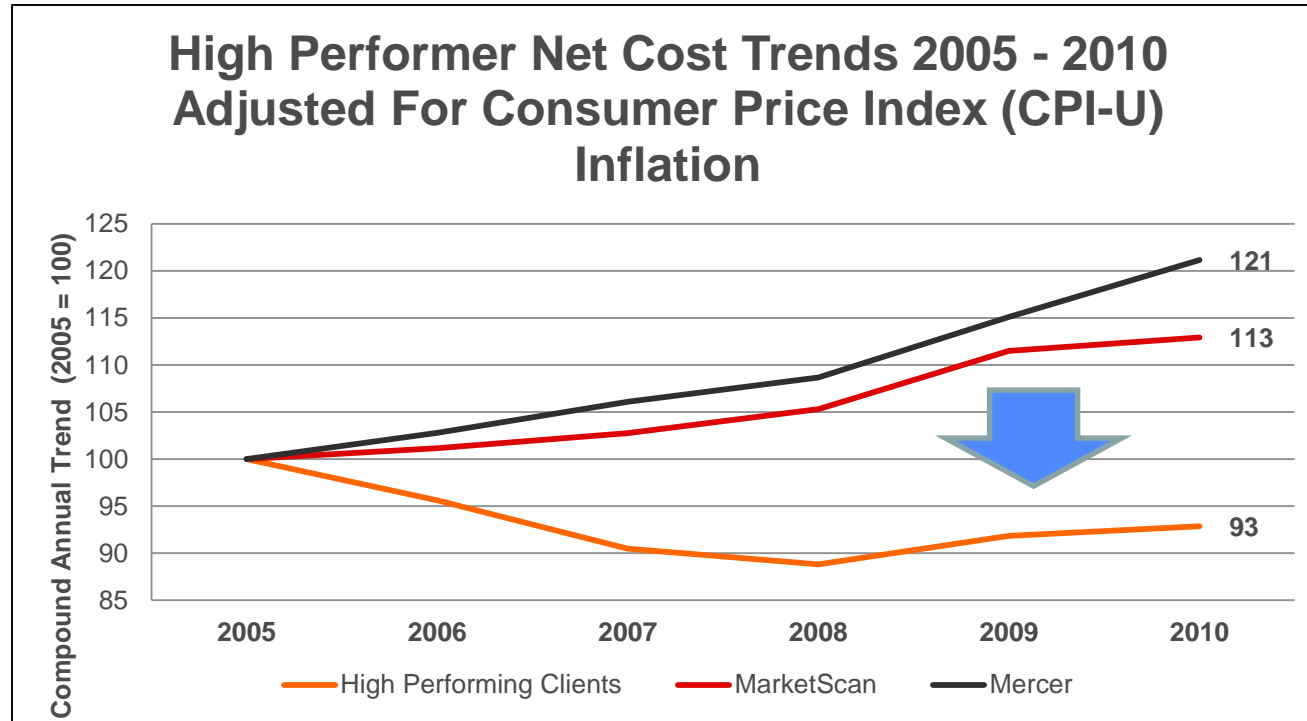
Johnson & Johnson Adjusted Medical And Drug Costs Versus Johnson & Johnson Expected Medical And Drug Costs With Comparison-Group Trend



Average Savings 2002-2008 = \$565/employee/year
Estimated ROI: \$1.88 - \$3.92 to \$1.00

The New Benchmark: *Bending the Curve*

A Selected Few Employers Whose Healthcare Costs Are Going Down



TRUVEN HEALTH ANALYTICS High Performers Clients

Eight employers, with self funded plans, spanning multiple industries who also utilize TRUVEN HEALTH ANALYTICS decision support and analytic consulting services. These clients consistently outperformed net pay trend rates for the broader 53 client group each year and cumulatively from 2005 – 2010. As a group, they have consistently made innovative use of healthcare data to support all aspects of population health, productivity and plan management.

MarketScan™

A group of over 50 TRUVEN HEALTH ANALYTICS clients with 5 million members covered in self funded plans that contributed to MarketScan continuously since 2005.

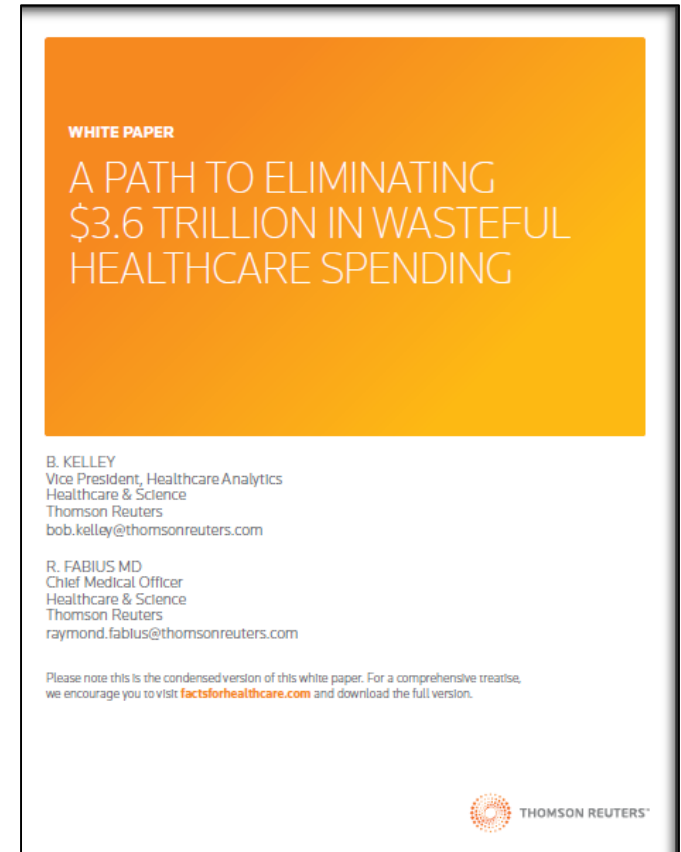
2010 Mercer National Survey

A comprehensive survey of 2,836 US employers. Reflecting the average reported healthcare trend rates across group size, geographic region and industry type.

A Fresh Perspective

Root causes of unnecessary healthcare inefficiency

1. Random access to care
2. Incidence of the “medically homeless”
3. Population readiness (un-readiness) to change
4. Employer / payer benefits efficiency myopia



What About The Medically Homeless?

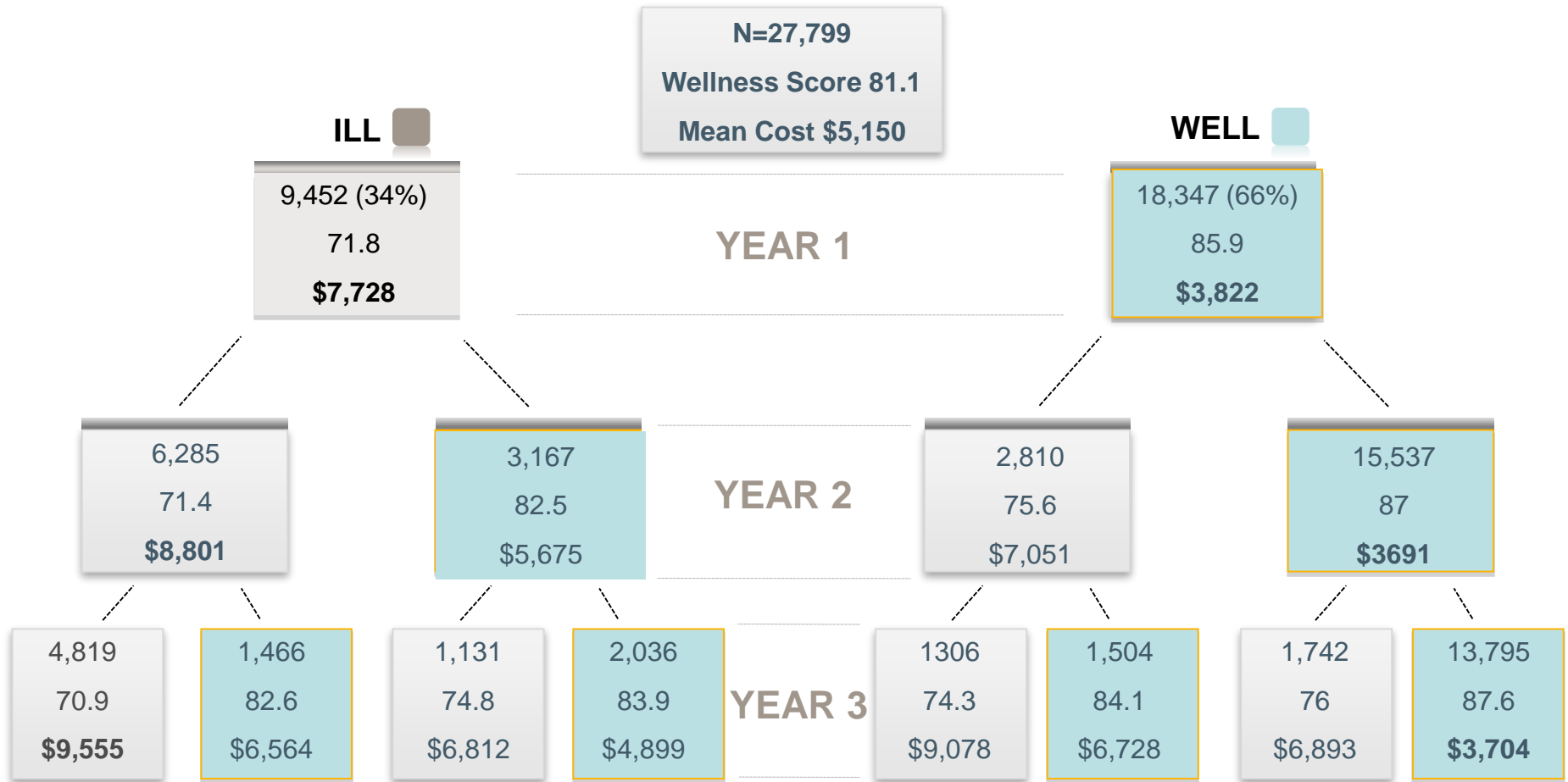
- What % of first 600,000 visits to Retail Clinics had no place to send the medical care follow up report?
 - A) 40%
 - B) 30%
 - C) 20%
 - D) 10%

Answer A) 40%



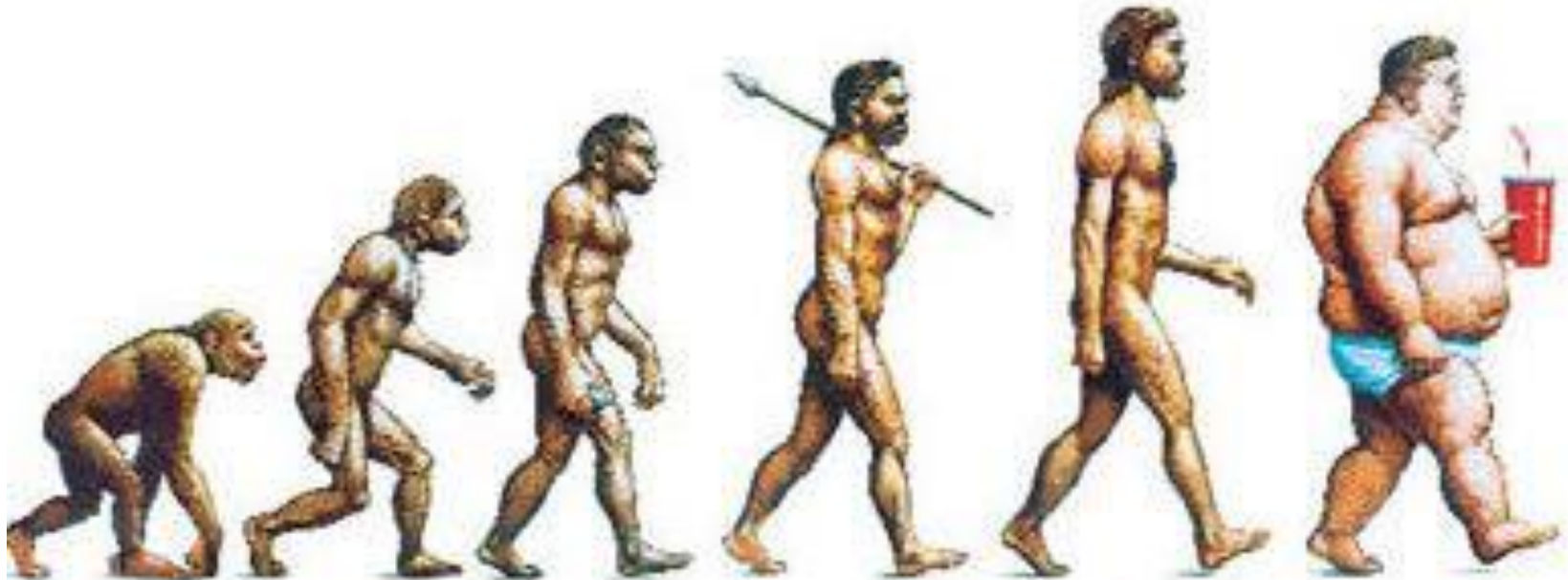
The primary issue is not the building of medical homes but the elimination of the medically homeless.

Greater Return to Keep The Well Well ~ 2.1: Wellness Score & Medical Costs Over 3 Years



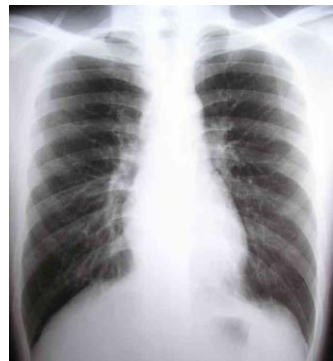
Zero Trends; Dee Edington 2009

Is the trend of disease progression possible to slow down?

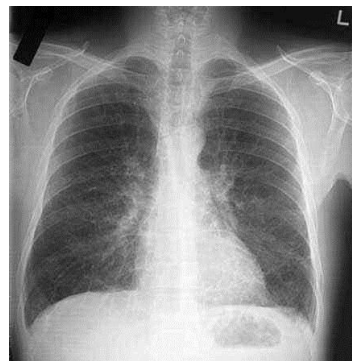


Insidious Progression of Disease:

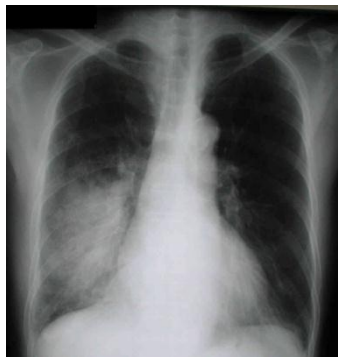
SMOKING & ACUTE ILLNESS LEADS TO CHRONIC & CATASTROPHIC ILLNESS



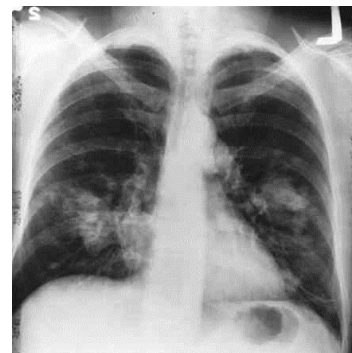
normal



bronchitis

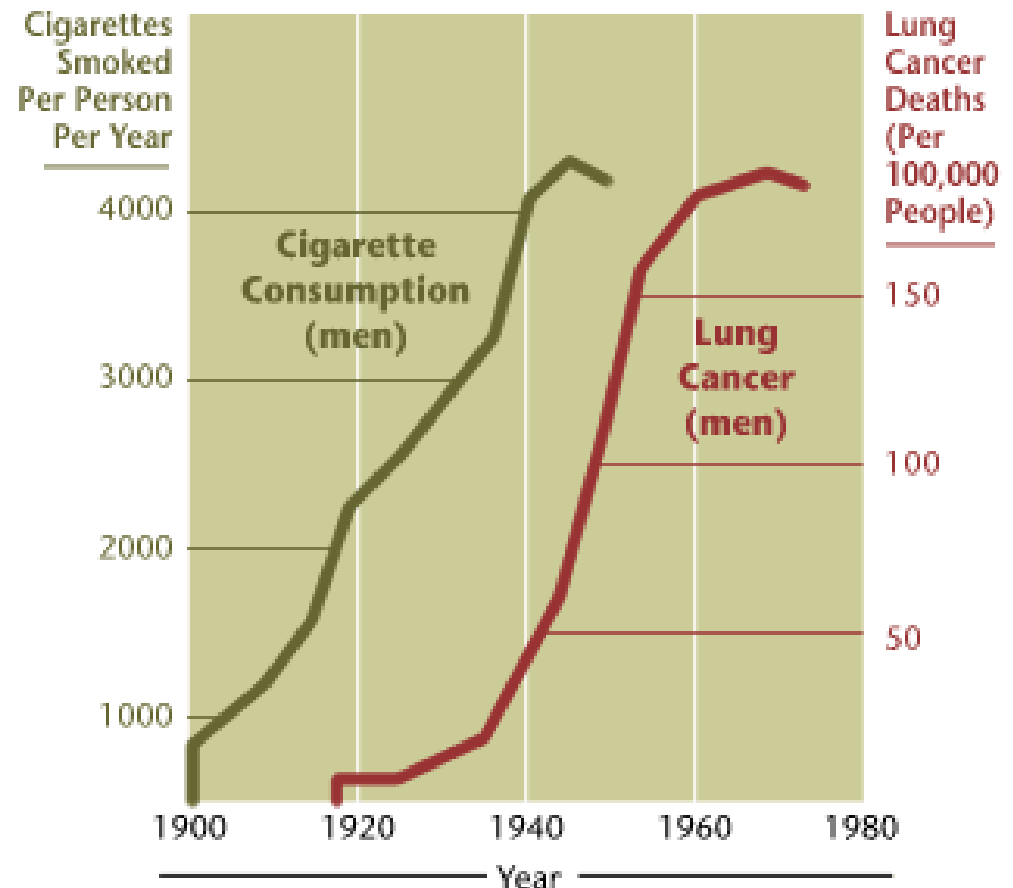


cancer



emphysema

20-Year Lag Time Between Smoking and Lung Cancer



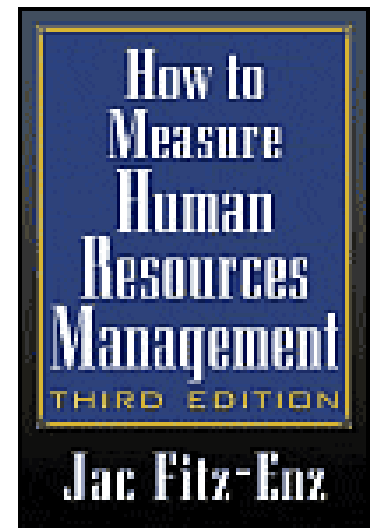
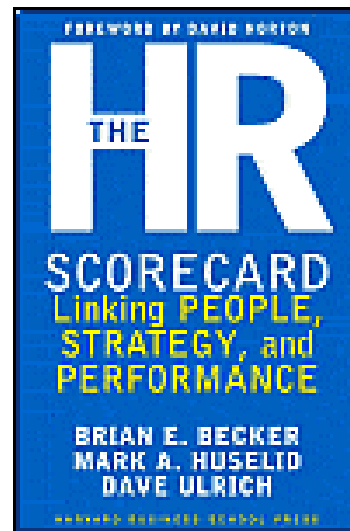
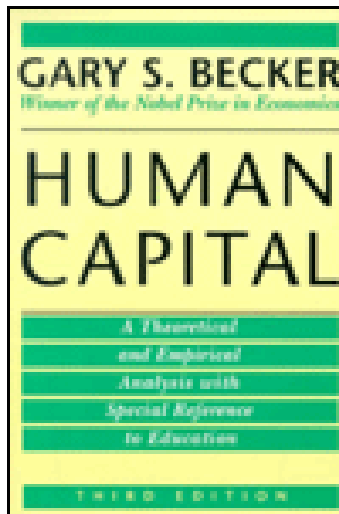
Productivity Gains

- Tenets of Human Resources – Skill & Will
- Presenteeism
- Impact of Obesity
- Multiple views of illness and employer costs
- Top Conditions related to productivity loss
- FULL cost of health on a business



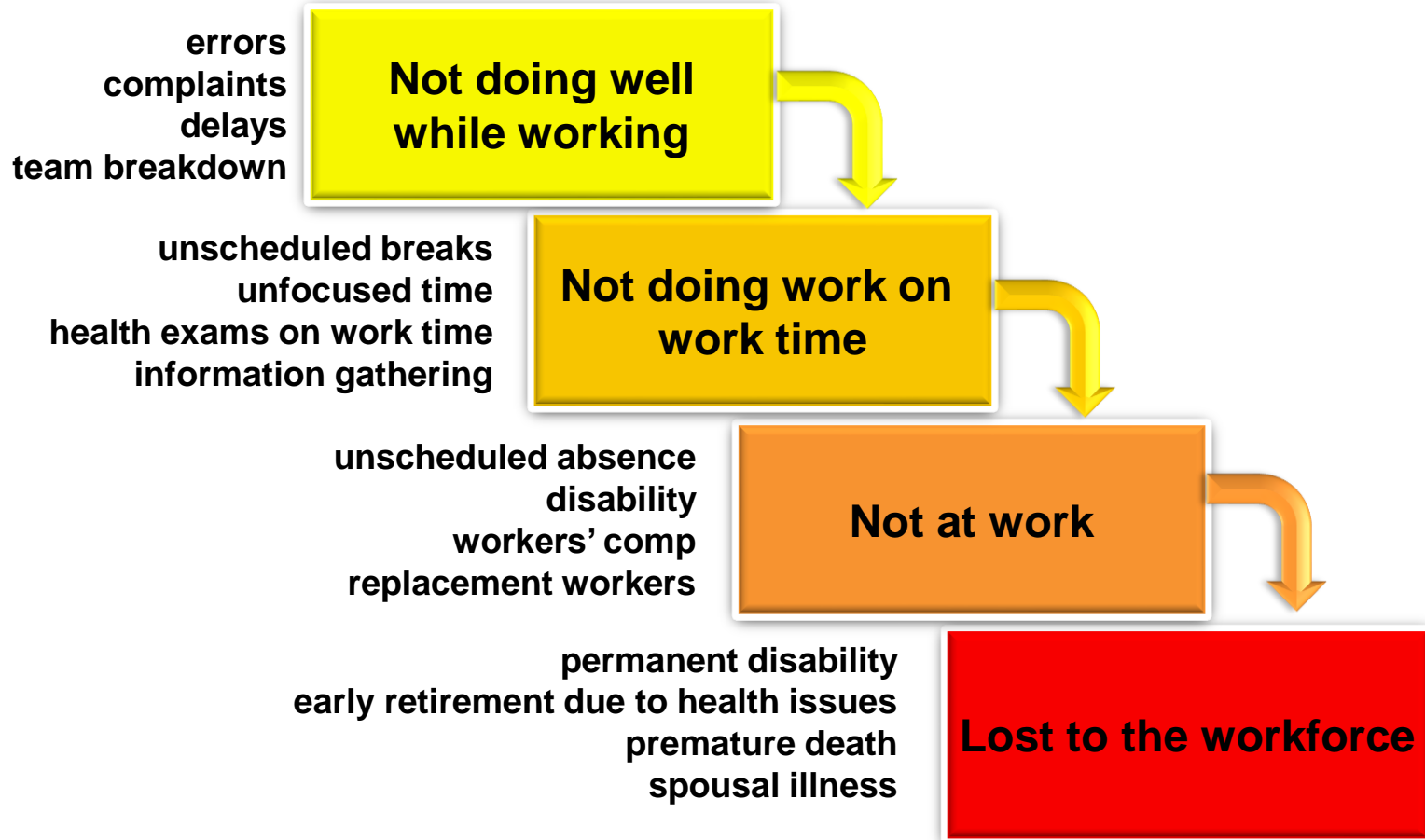
The Skill & The Will

But What About Not Being ill!



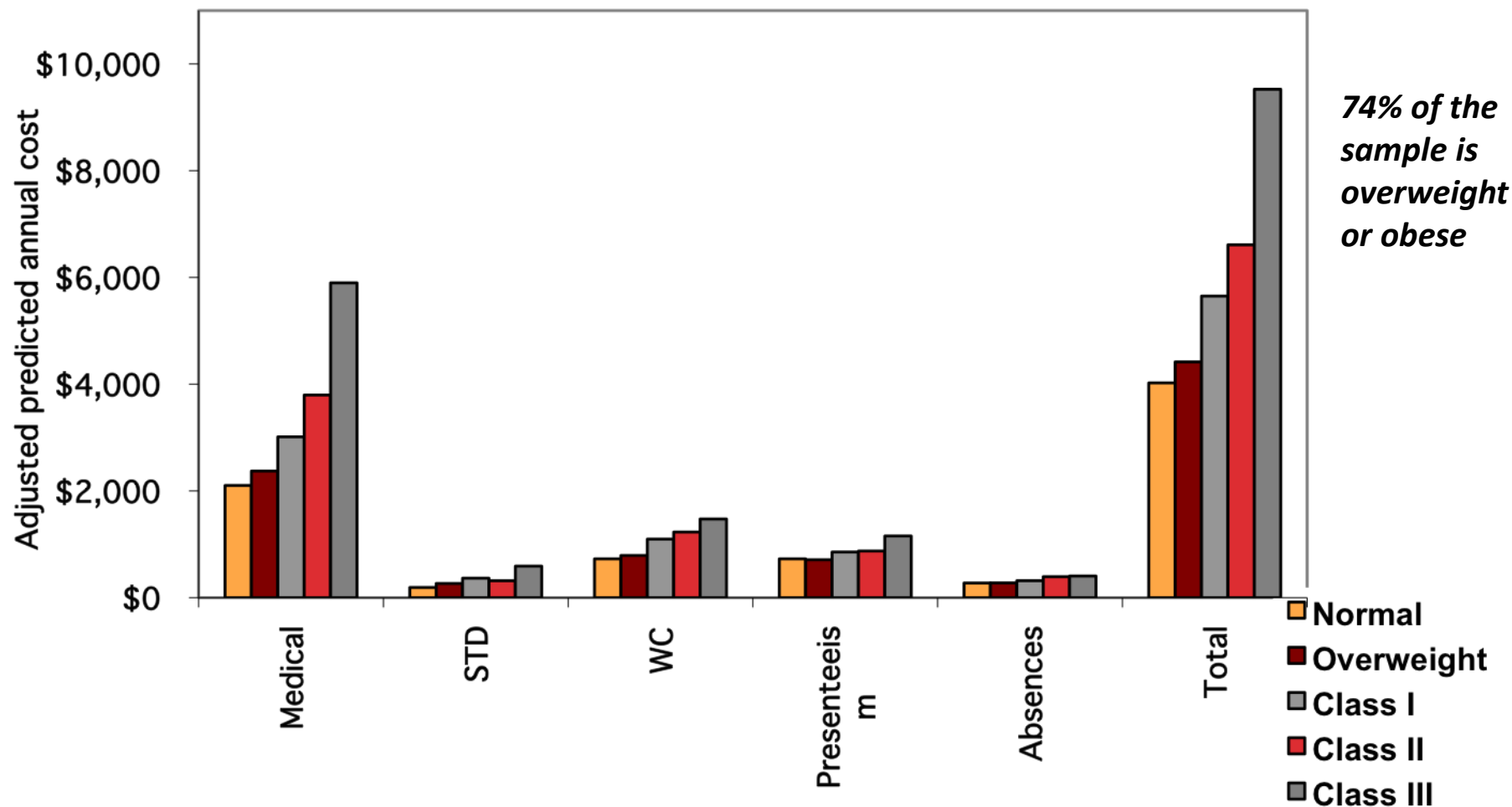
Poor Health Also Impacts –Safety, Service & Financial Results

Continuum of Employee Performance Outcomes



OVERWEIGHT/OBESE ANALYSIS (N=11,217)

Adjusted predicted annual costs for employees by BMI

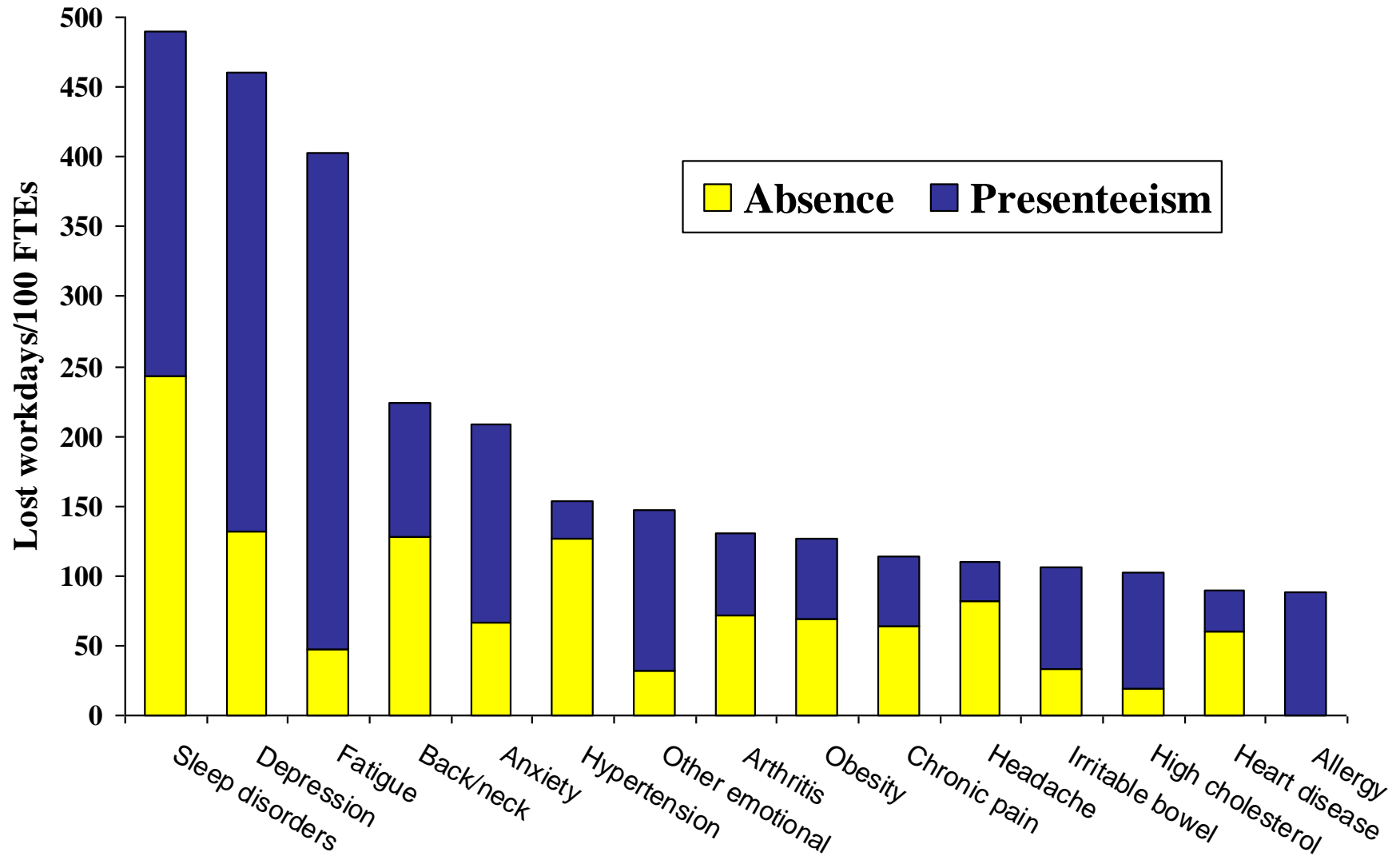


Multiple Views of Health Related Costs

	Medical	Pharmacy	Medical & Pharmacy	Productivity	Total Cost
1	Cancer (w/o skin)	GERD	Cancer (w/o skin)	Depression	Depression
2	Back/Neck Pain	Diabetes	Back/Neck Pain	Obesity	Obesity
3	Other Chronic Pain	Hypertension	Other Chronic Pain	Anxiety	Arthritis
4	Coronary Heart Disease	Arthritis	Depression	Arthritis	Back/Neck Pain
5	Depression	Allergy	Coronary Heart Disease	GERD	Anxiety
6	Sleeping Problem	Depression	Arthritis	Allergy	GERD
7	Arthritis	Asthma	Diabetes	Hypertension	Allergy
8	Skin Cancer	Anxiety	Hypertension	Back/Neck Pain	Cancer (w/o skin)
9	Diabetes	Migraine	GERD	Sleeping Problem	Other Chronic Pain
10	Obesity	Osteoporosis	Sleeping Problem	Fatigue	Hypertension

Loeppke, R., et al., "Health and Productivity as a Business Strategy: A Multi-Employer Study", JOEM, 51:4, April, 2009. pp 411-428.

Top 15 Drivers of Lost Work Time



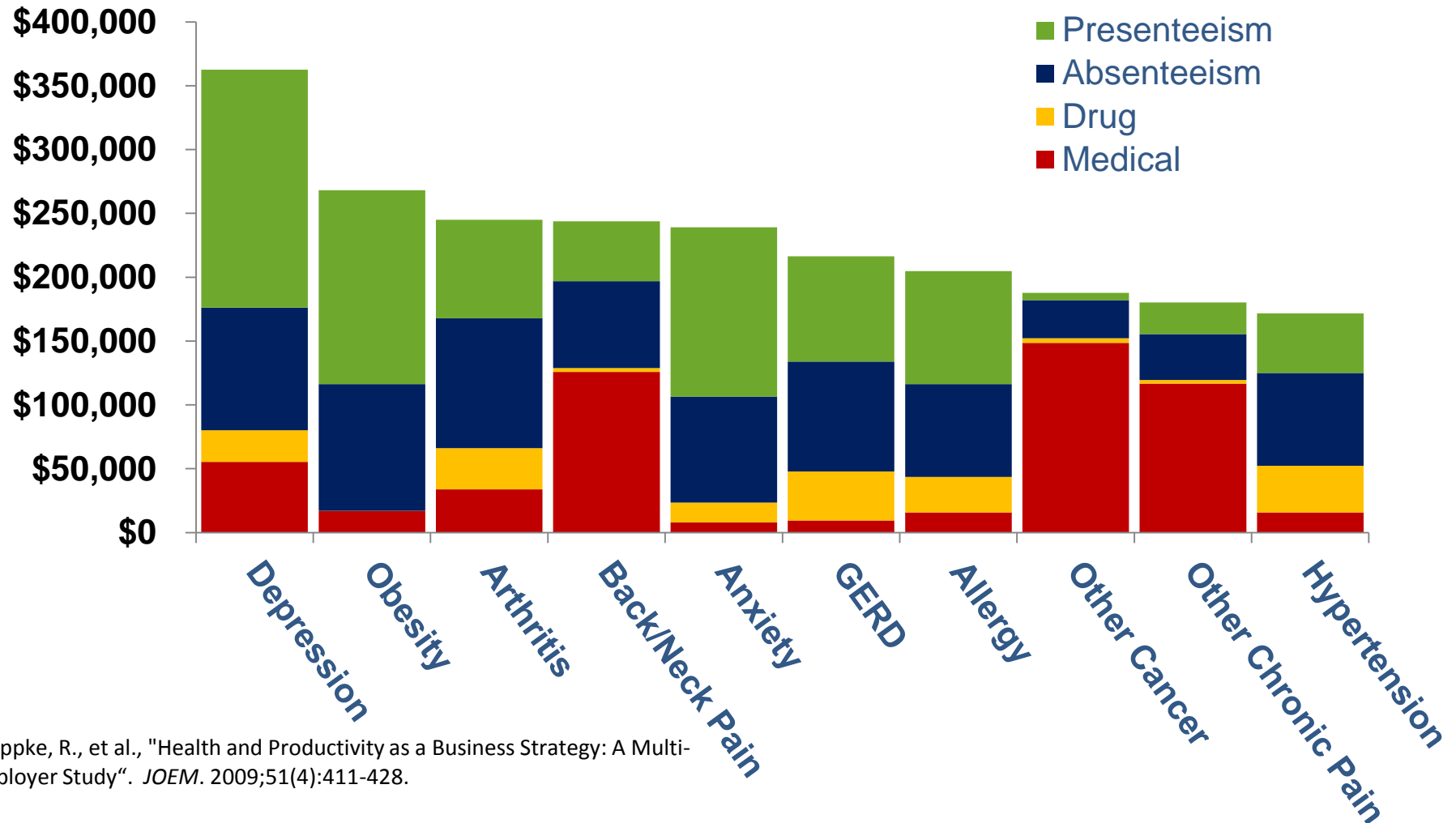
Source: Kessler's HPQ – Adjusted to Workforce

Top 10 Health Conditions

HealthNEXT

by Full Costs For Employers

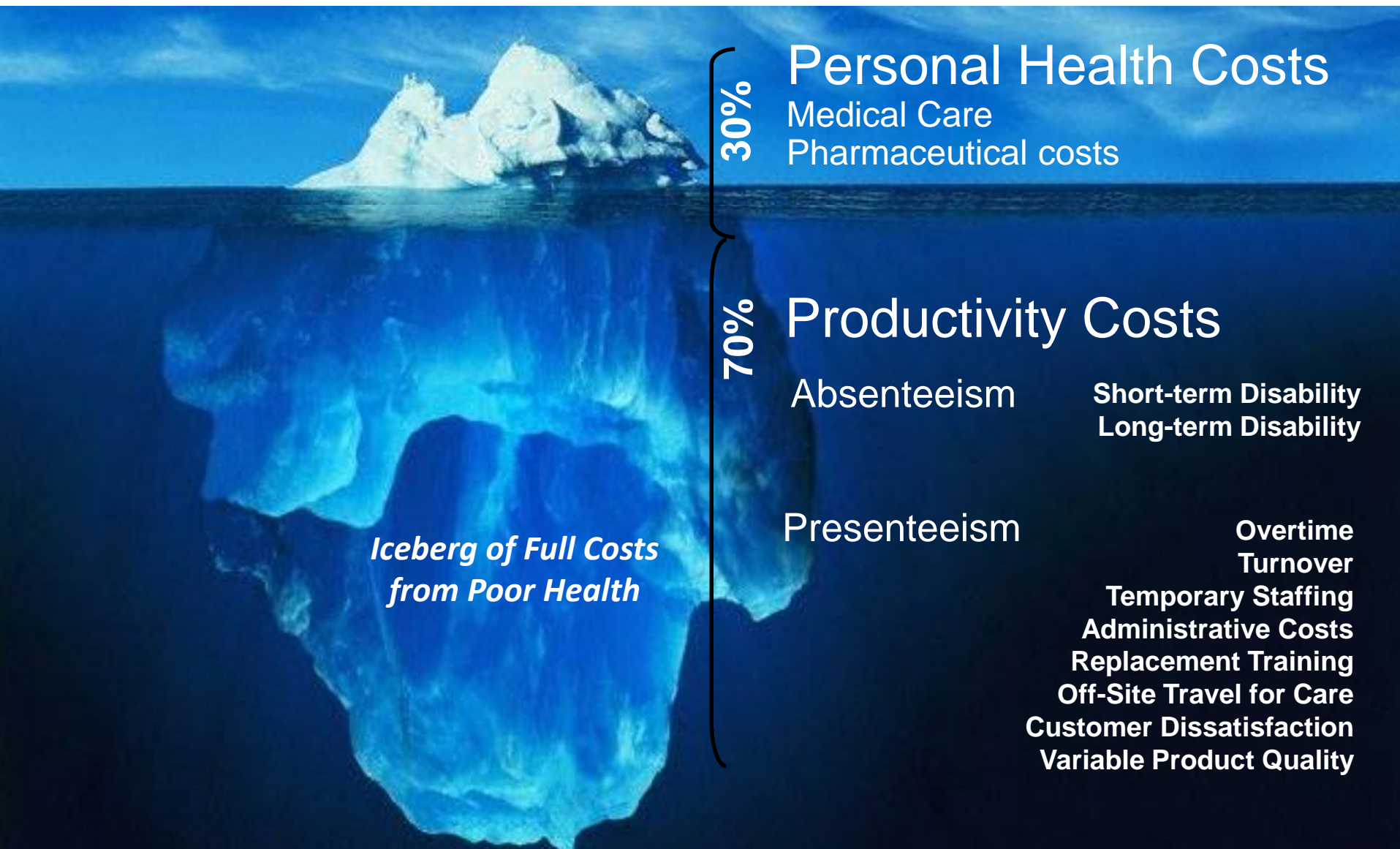
(Med + RX + Absenteeism + Presenteeism) Costs/1000 FTEs



Loeppke, R., et al., "Health and Productivity as a Business Strategy: A Multi-Employer Study". *JOEM*. 2009;51(4):411-428.

Economic View of Opportunity

The *Full* Cost of Poor Health to Employers



Evidence for Workplace Health Improvement

A large proportion of illness is preventable by reducing health risks
(Healthy People 2000, 2010; Amler & Dull, 1987; Breslow, 1993; McGinnis & Foege, 1993; Mokdad et al., 2004).



Health risks can be improved through workplace health programs
(Loeppke, et al., 2008; Wilson et al., 1996; Heaney & Goetzel, 1997; Pelletier, 1999).



Reductions of health risks can lead to reductions in health costs
(Edington et al., 2001; Goetzel et al., 1999)

Employee Engagement

- Engagement in Health Improvement
 - Reinforcing Behavior
 - Behavioral Economics
 - The Impact of Trusted Clinicians
 - Engagement leads to results
- Engagement in Work
 - Discretionary Effort
 - Extension of Salesforce
 - Ambassador of Company



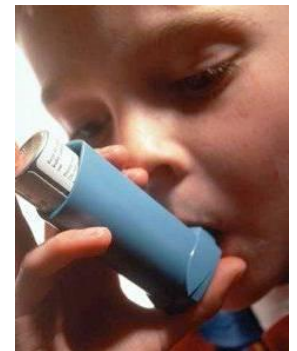
Engagement

REINFORCING BEHAVIORS



Leveraging Behavioral Economics to Improve Engagement

- **Use the magic of opt-out**
 - Make the preferred choice the default
- **Mere measurement**
 - Interventional surveys
- **Aversion of loss**
 - Taking away privileges or rewards
- **Value Based Benefit Design**
 - Out of pocket costs based on proven value provided by medication or treatment
 - No co-payments for generic “rescue inhalers” for asthmatics
- **Provide rewards and recognitions for healthy behaviors**
 - Completing health risk assessments
 - Having a non-smoking status
 - Participating in health coaching
- **Earn basic, better and best benefit plans**
- **Mastery**
 - Educate leading to self-care
 - Peer mentoring
- **Rank Comparison**
 - Competition



Benefits of Identification with a Primary Care Provider & Office

Barbara Starfield MD; Johns Hopkins Medical School

Benefits of Longitudinality, Based on Evidence from the Literature

	Identification with a Person	Identification with a Place
Better problem/needs recognition	++	
More accurate/earlier diagnosis	++	
Better concordance		
Appointment keeping	++	++
Treatment advice	++	
Less ER use	++	
Fewer hospitalizations	++	+
Lower costs	++	+
Better prevention (some types)	++	++
Better monitoring	+	
Fewer drug prescriptions	+	
Less unmet needs	++	+
Increased satisfaction	++	

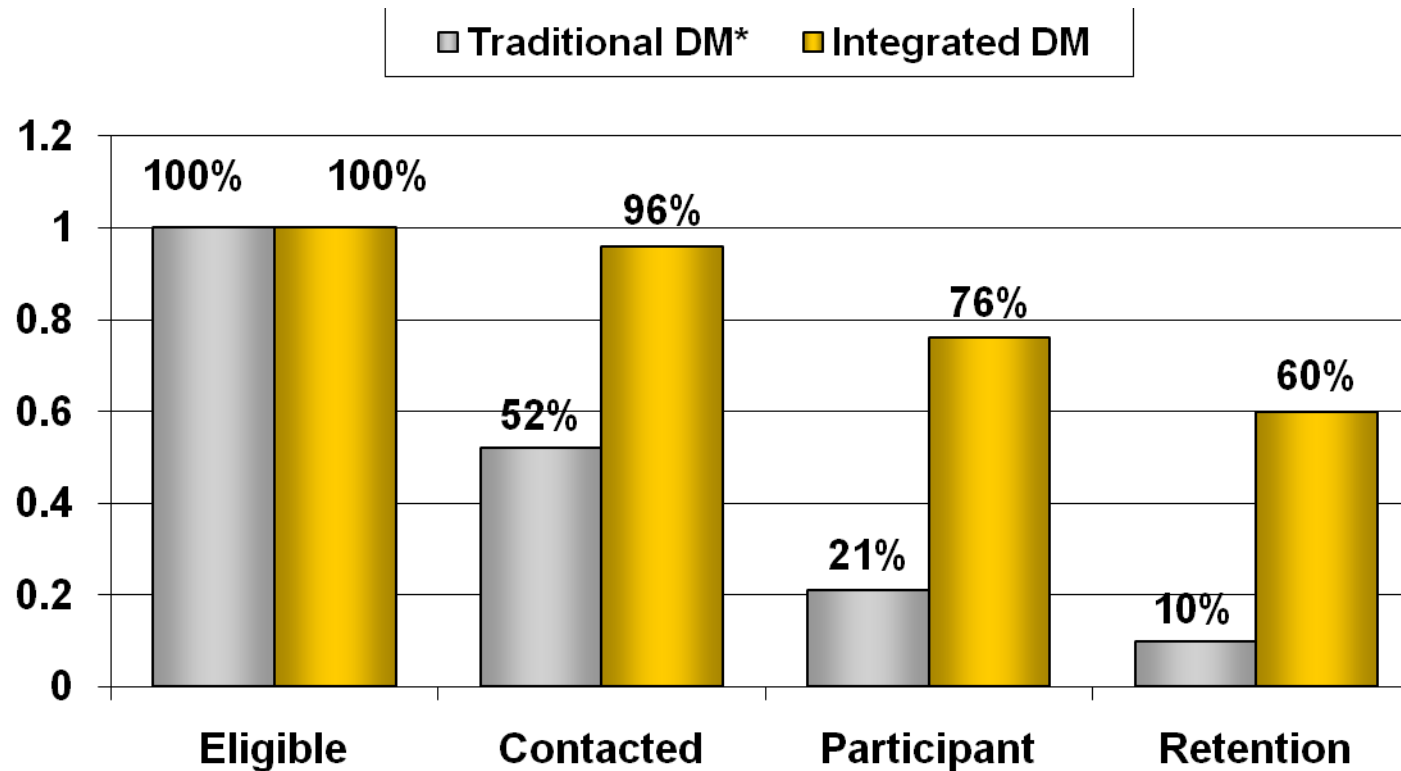
++Evidence good

+Evidence moderate

Source: Starfield. Primary Care: Balancing Health Needs,
Services, and Technology. Oxford U. Press, 1998.

Starfield 11/02
LONG 2361

Trusted Clinician Relationships Drives Improved DM Engagement & Retention



* Lynch et al. Documenting Participation in a DM Program. JOEM 2006; 48(5)

1 Frazee et al. Leveraging the Trusted Clinician: Documenting Disease Management Program Enrollment. Disease Mgmt 2007; 10:16-29

2 Frazee et al: Leveraging the Trusted Clinician: Increasing Retention in Disease Management through Integrated Program Delivery POPULATION HEALTH MANAGEMENT Volume 11, Number 5, 2008

No single definition of Employee “*Engagement*”

- Total commitment & motivation
- Fully aligned with the company's mission
- Willing to go the extra distance
- Proud of the company they work for
- Values the company, and is valued by it in return



Why does it matter?

- **Engaged employees:**

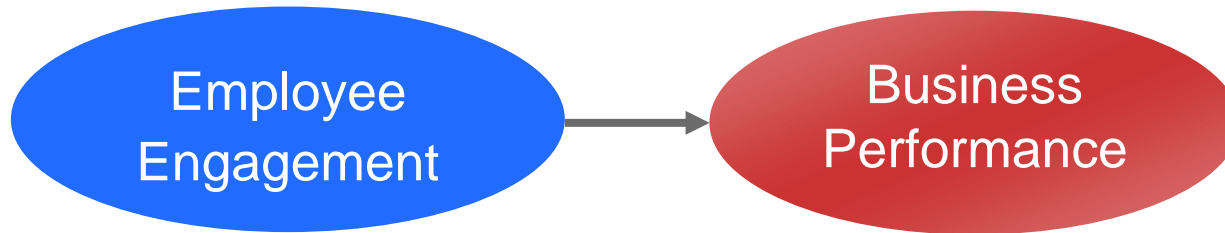
- Perform up to 20% better than less-engaged employees
- Are 87% less likely to leave the organisation than employees with low levels of engagement
- Are more innovative
- Are more committed to customer satisfaction
- Contribute more to their organisation than their less engaged peers
- Consistently go the extra mile



(Source: CLC. 50,000 employees world wide, 2004)

Unilever

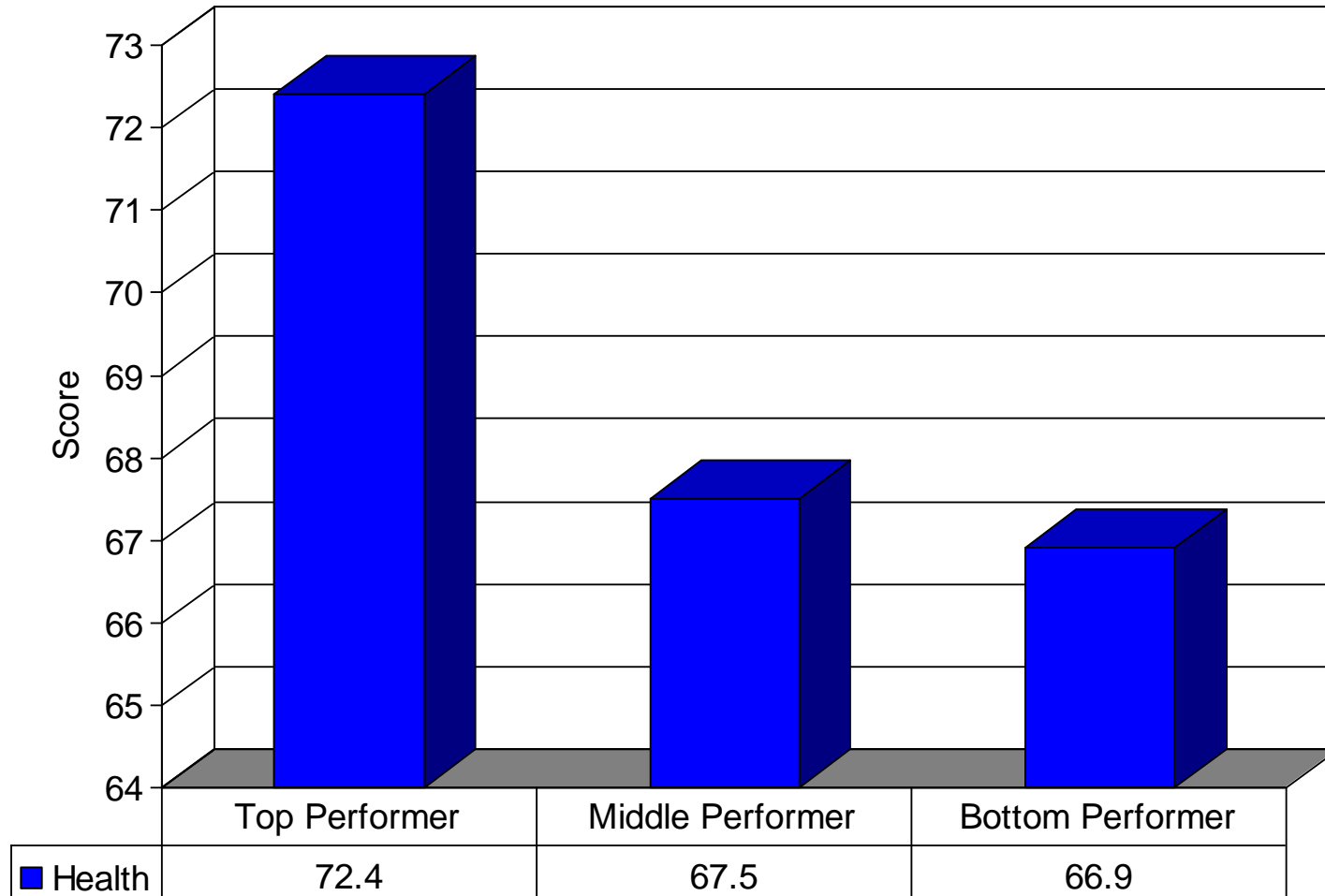
Why does it matter?



- **Companies with HIGH employee engagement saw:**
 - 13.2% improvement in net income growth
 - 19.2% improvement in operating income
 - 27.8% improvement in Earnings per Share
- **Companies with LOW employee engagement saw:**
 - 3.8% decline in net income
 - 32.7% decline in net income growth
 - 11.2% decline in EPS

(Source: ISR. 664,000 employees world wide, one-year study, 2006)

Unilever LampLighter Findings



Health & Employee Commitment

Unilever Lamplighter Program



Health Benefits

- 18% increase in the number of employees who exercised
 - 5% drop in the number of employees with high BMI
 - 13% drop in the number of employees with high blood pressure...(down from 21% to just 8%)
 - 8% drop in the number of employees with high cholesterol
 - 5% decrease in the number of employees classed as having poor nutrition
 - 8% decrease in the number of smokers.
- Overall the number of employees classed as 'high health risk' dropped by 5%
- Overall the number of employees classed as 'low health risk' increased by 23%

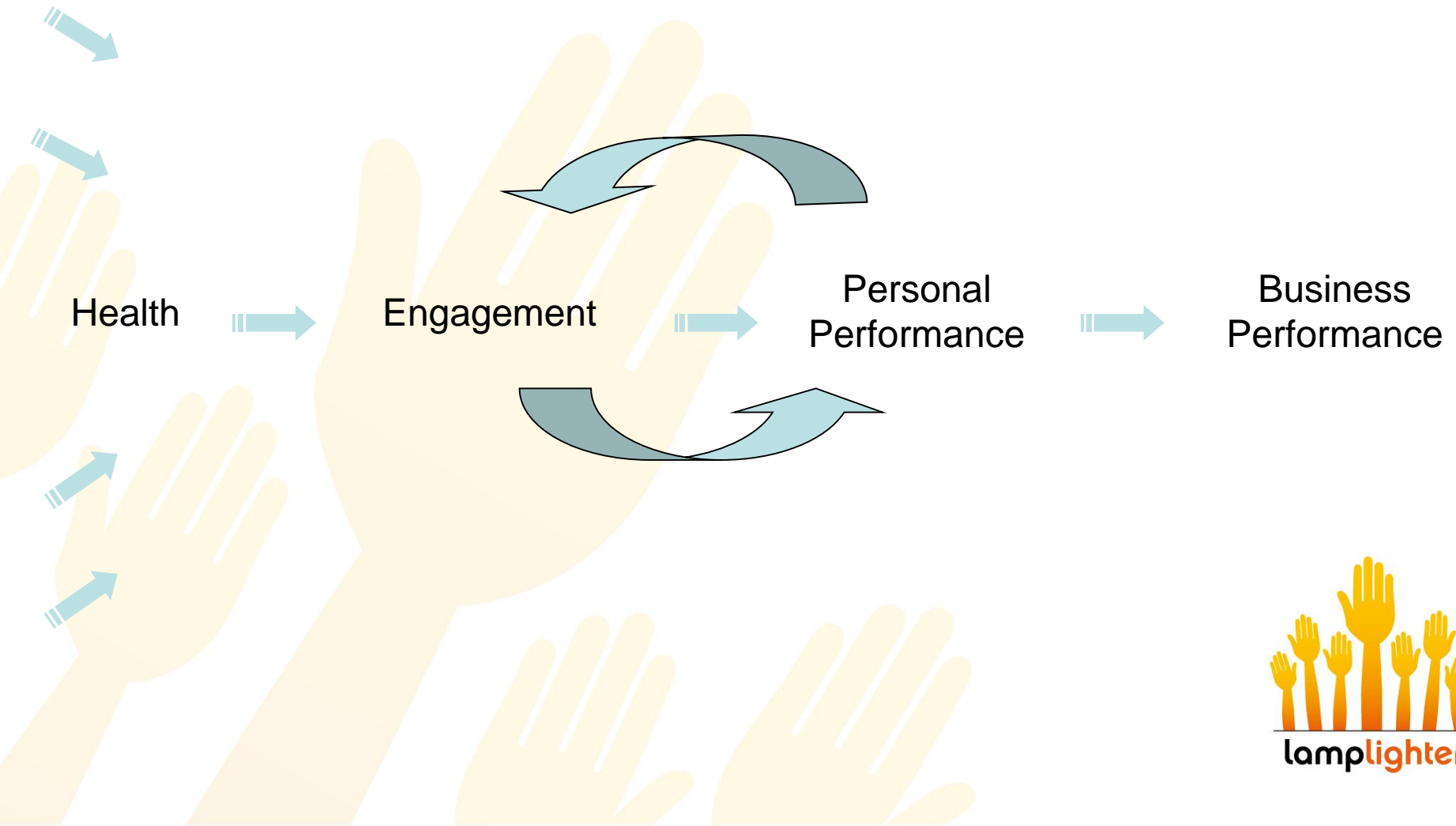


Engagement Enhancement

The Lancaster study showed that employees who participated in Lamplighter:

- **Felt significantly more engaged with their work**
- **Were less likely to take time off work due to health problems**
- **Were able to perform better in their job**
- **Were less likely to be adversely affected by pressure at work**
- **Were more likely to practice healthy behaviors at work**

The Health & Performance Chain



Employer of Choice

- Supporting Health & 100 Best Companies to Work For
- Yum Brands – reducing turnover
- Goldman Sachs – retaining and attraction the best talent



Fortune Magazine

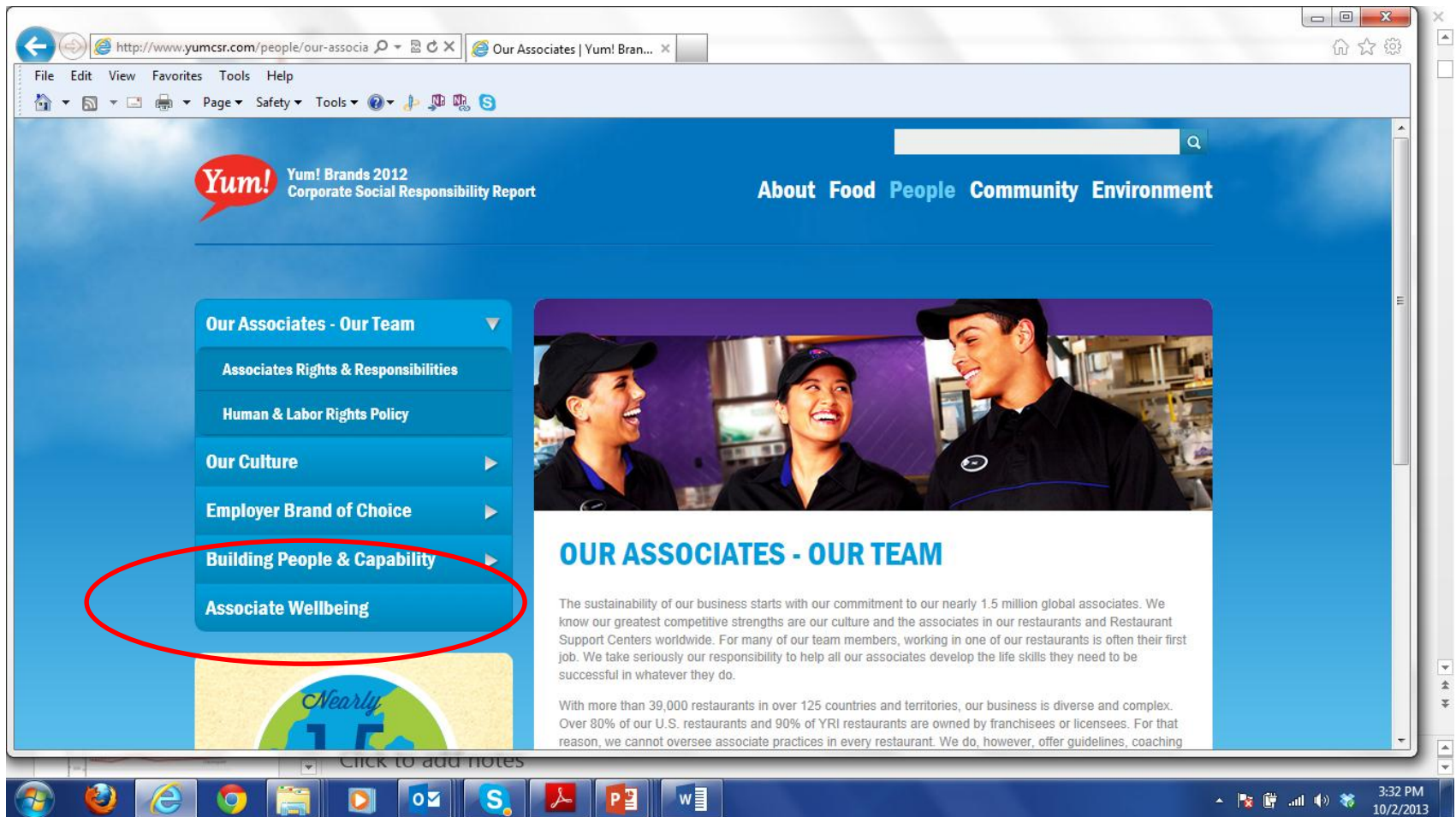
Workplace Health as a Key Driver of Employee Satisfaction

Comprehensive health and wellness services are mentioned several times as the reason why a company achieved “Employer of Choice” status



Yum Brands

Reducing Turnover



The Goldman Sachs Wellness Exchange

Attracting and Retaining Talent

- An integrated suite of services designed to support your personal health and well-being and to help you manage your personal and family responsibilities.
- While specific services may vary by location/region, core offerings generally include: **Supporting Your Health and Well-Being**
 - On-site health centers with access to medical professional
 - On-site fitness centers or off-site fitness subsidies
 - Referrals to medical professionals
 - Patient advocacy and critical health solutions assistance
 - Smoking cessation programs
 - Travel resources and immunizations
 - Ergonomic work station evaluations
 - Recreational activities/events (outings, runs/walks, team clubs and leagues)

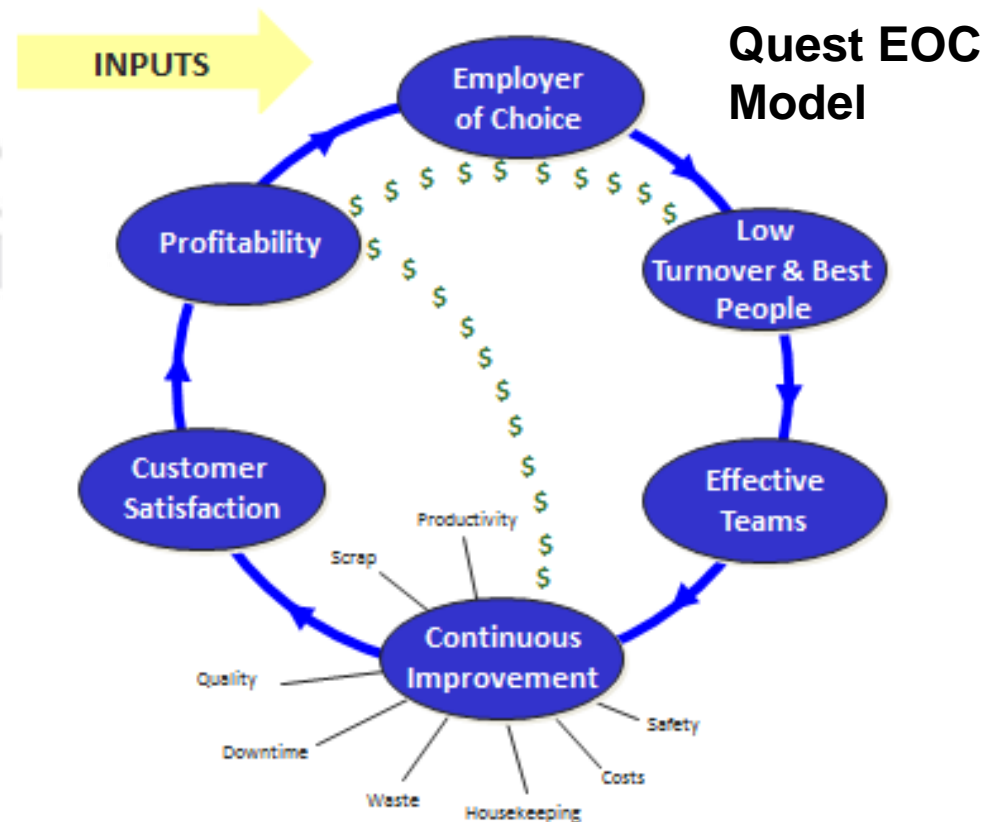
The Value of “EOC”

Employer of Choice Benefits are Pervasive

The benefits of becoming an “employer of choice” are not easy to quantify due the pervasive effects it has on so many aspects of an organization

However the following is generally accepted for just the benefits of lower turnover:

- The costs of time and lost productivity are no less important or real than the costs associated with paying cash to vendors for services such as advertising or temporary staff.
- These calculations will easily reach 150% of the employees annual compensation figure. The cost will be significantly higher (200% to 250% of annual compensation) for managerial and sales positions.
- To put this into perspective, assume the average salary of employees in a given company is \$50,000 per year. Taking the cost of turnover at 150% of salary, the cost of turnover is then \$75,000 per employee who leaves the company. **For the mid-sized company of 1,000 employees who has a 10% annual rate of turnover, the annual cost of turnover is \$7.5 million!**



<http://findtalentkeep talent.wikispaces.com/Quest+Employer+of+Choice+Model>

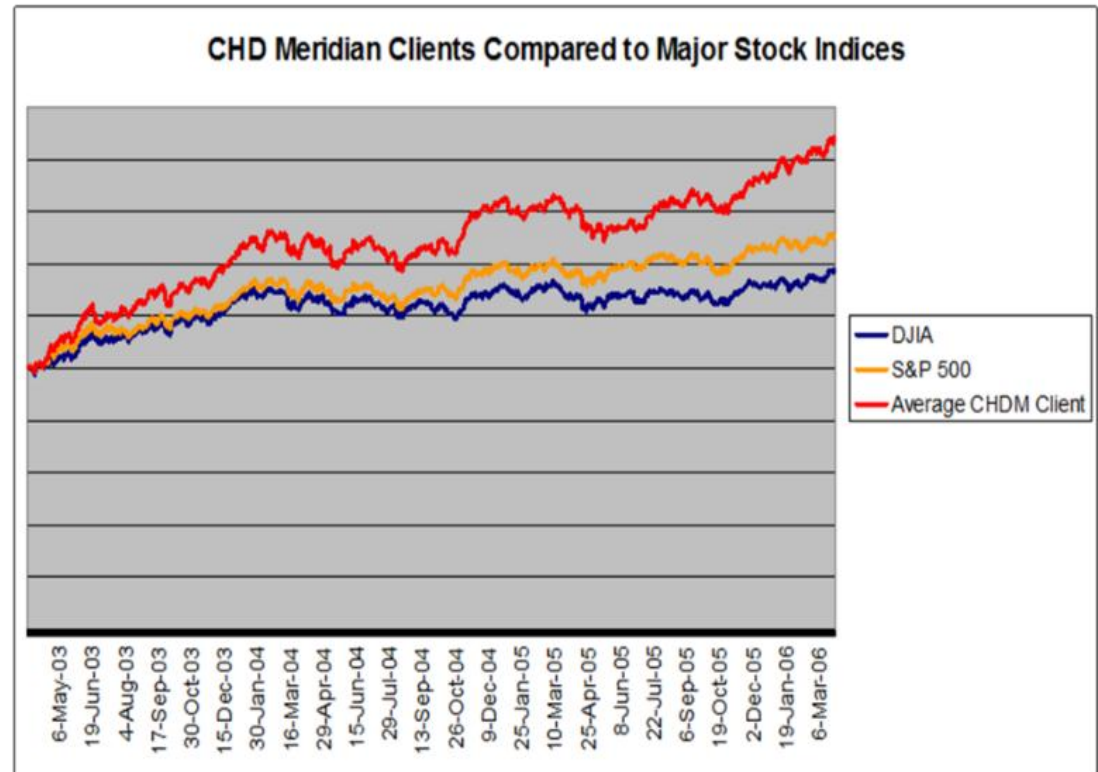
Return to Investors

- **I-trax (AMX:DMX) Research**
 - The Connection of Workplace Health Centers and Market Performance
- **Our Most Recent Publication**
 - **The Link Between Workforce Health and the Bottom Line –**
Tracking the Market Performance of Companies that Nurture a Culture of Health
- **The HealthNEXT Advantage Fund**

I-trax Research

(2006)

- Over 200 onsite health clinics; Over 60 employers; 65% of them publicly traded
- Tracked as an investment portfolio; back-cast to 2003
- For every \$1 invested in the DJIA and S&P 500, our (I-trax) client portfolio yielded at least 2X the growth to their shareholders in less than 3 years



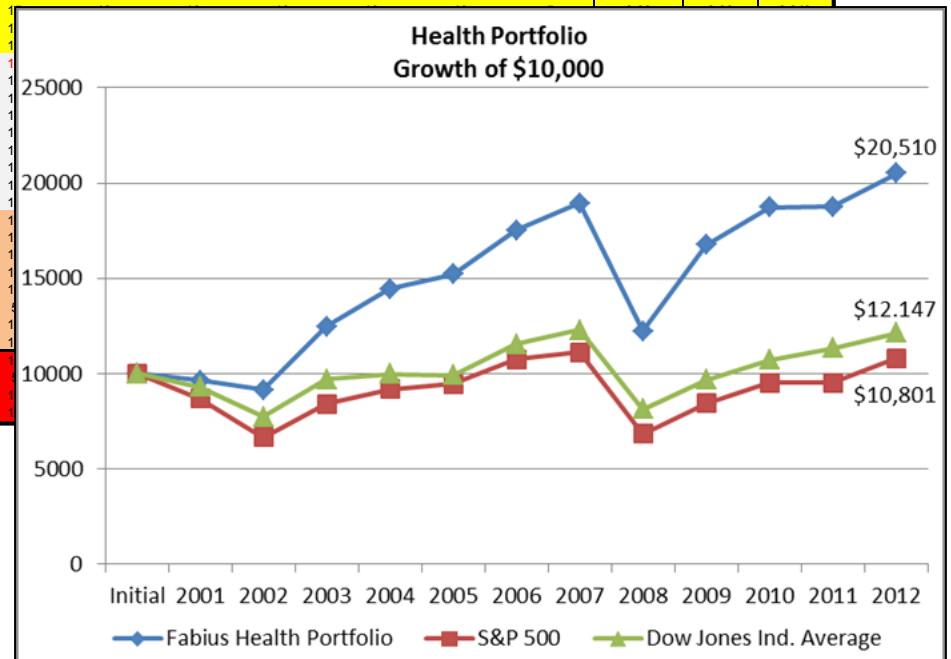
HealthNEXT Research

(Health Advantage Fund 2008 – present)

HealthNEXT

- Created a stock portfolio based on the key learning from the HealthNEXT Employer Health Opportunity Assessment (EHOA) scorecard
- Invested \$400,000 into the portfolio of **approximately 30 publicly traded companies most invested in the health of their workforce**; using a scoring criteria to weight & unweight the portfolio based on employer score
- Back-casted to 2001
- Again, this portfolio has consistently outperformed the market by magnitudes; in both good times and bad

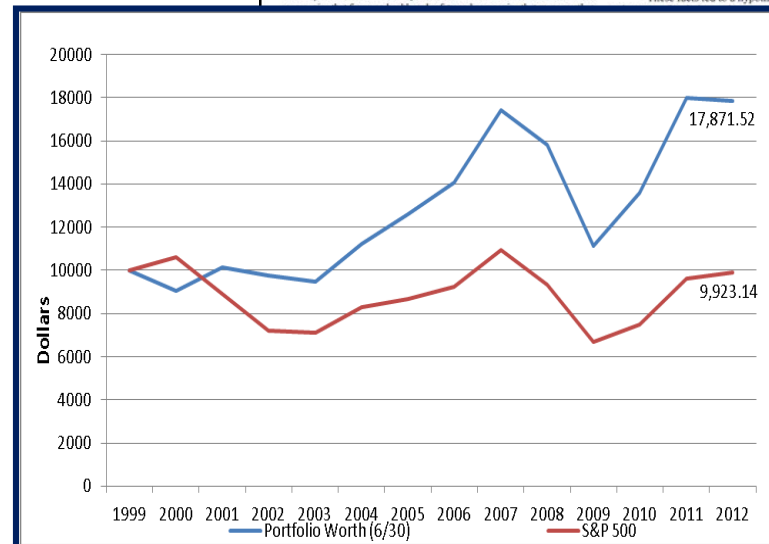
	Health Points							Average Weighted Health	Consensus	Overall Weighted 75% / 25%
	25 Points	20 Points	15 Points	10 Points	10 Points	10 Points	10 Points			
Platinum (35%)	20	20	15	5	10	10	10	3.60	3.37	3.542
	25	20	15	5	10	10	10	3.80	2.51	3.478
	25	10	10	5	10	10	10	3.20	3.35	3.238
	15	15	15	10	10	10	5	3.20	3.31	3.228
	20	20	15	5	10	10	10	3.60	3.07	3.468
Gold (30%)	25	5	10	10	5	5	0	2.40	4.00	2.800
	10	15	15	10	10	10	5	3.00	3.38	3.096
	10	15	15	10	10	10	10	3.20	3.34	3.236
	15	15	15	5	10	10	5	3.00	2.57	2.892
	25	5	5	5	10	10	10	2.80	3.74	3.034
	15	15	10	10	10	10	10	3.20	2.40	3.000
	20	15	15	5	10	10	0	3.00	3.39	3.098
Silver (23%)	1	1	1	1	1	1	1	1	1	1
	1	1	1	1	1	1	1	1	1	1
	1	1	1	1	1	1	1	1	1	1
	1	1	1	1	1	1	1	1	1	1
Bronze (12%)	x	x	x	x	x	x	x	x	x	x
	x	x	x	x	x	x	x	x	x	x
	x	x	x	x	x	x	x	x	x	x
	x	x	x	x	x	x	x	x	x	x



ACOEM / HealthNEXT Research (September 2013)

Marketplace rewards companies who achieve cultures of health:

- Used the ACOEM Corporate Health Achievement Award (CHAA) culture of health award winners as a stock portfolio
- A portfolio of approximately twenty publicly traded award winners; over nearly two decades
- Published September 2013 in the *JOEM*
- Once again the portfolio outperformed the market significantly; in all four test scenarios



Research Conclusion

A preponderance of mounting evidence

FAST TRACK ARTICLE

The Link Between Workforce Health and Safety and the Health of the Bottom Line

Tracking Market Performance of Companies That Nurture a "Culture of Health"

Raymond Fabius, MD, R. Dixon Thayer, BA, Doris L. Konicki, MHS, Charles M. Yarbrough, MD, Kent W. Peterson, MD, Fikry Isaac, MD, Ronald R. Loepke, MD, MPH, Barry S. Eisenberg, MA, and Marianne Dreger, MA

"Though correlation is not the same as causation, the results consistently and significantly suggest that companies focusing on the health and safety of their workforce are yielding greater value for their investors as well. More research needs to be done to better understand the value of building these 'cultures of health' in the workplace. Perhaps such efforts as this simply identify 'smart' companies that out-perform. But the evidence appears to be building that healthy workforces provide a competitive advantage in ways that benefit their investors."

colleagues," reported that pharmaceutical costs spent, an of health-related productivity health risks and medical con- (e) was shown to have a larger enticement, with executives and morbidities demonstrated the

Companies that create an en- pendents that reinforce a healthier lifestyle (ing of appropriate h health") should be n ive business perform

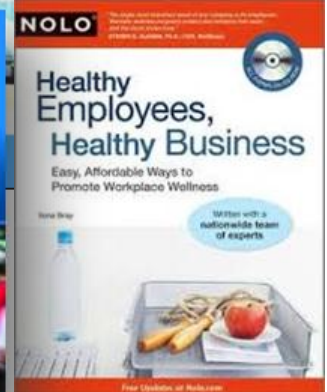
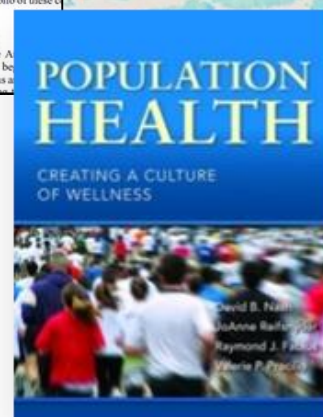
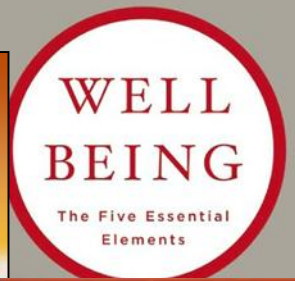
hypothesis, we tracked th proven health, se ferent scenarios. To us of the American y) Corporate Health ion and past mark estment in public 7 to 2012 under one on. companies are recog althy workforce, and sts and improved pr portfolio of these co

UND as the A dicine be physicians a



From the author of the #1 Wall Street Journal bestseller
StrengthsFinder 2.0

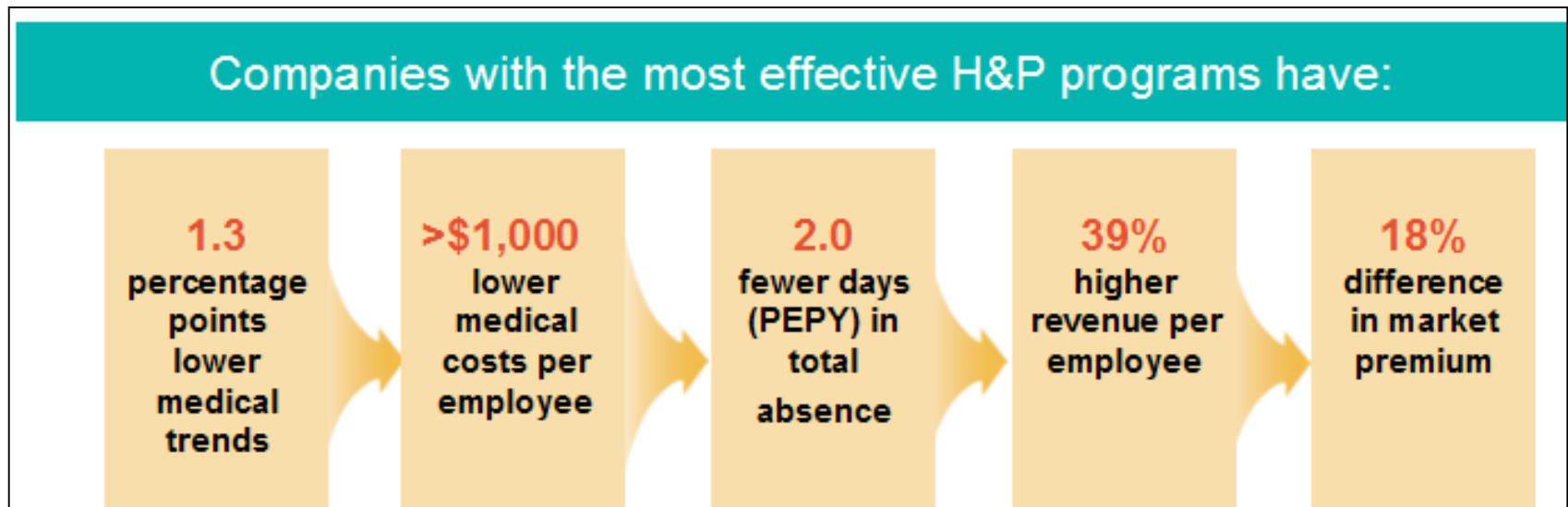
Workplace Clinics and Employer Managed Healthcare
A Catalyst for Cost Savings and Improved Productivity
A. Michael LaPenna



The Connection Between Health & Wealth

- **Towers Watson Study**
 - The Value of a Healthy Workforce
- **At the State Level**
- **At the Country Level**
 - Closing with a Big Data Healthcare HERO
 - ***HANS ROSLING – BBC clip***

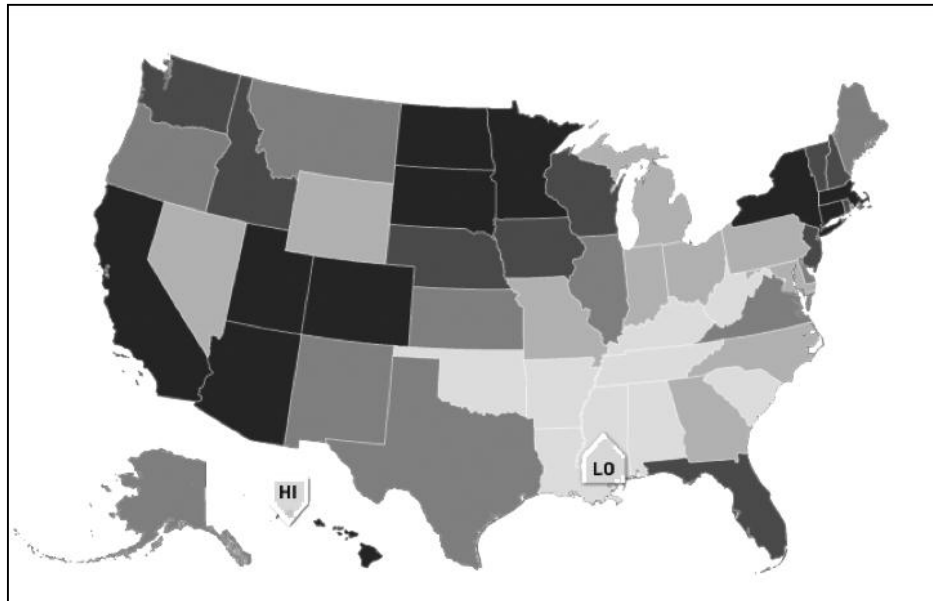
Health Means Wealth



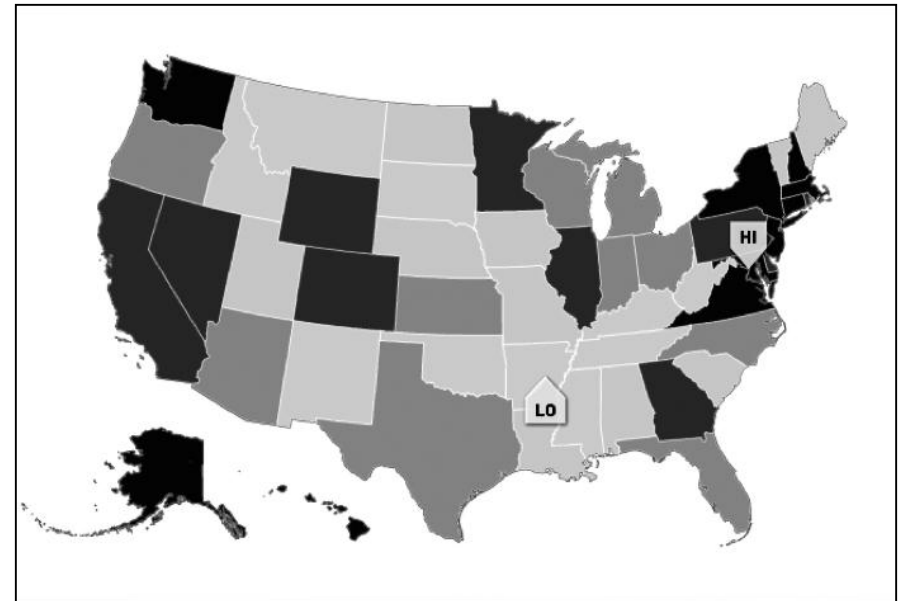
2009 Towers Watson Study

Health Means Wealth

Life Expectancy Correlates With Income at State Level



Life Expectancy



Average Income

Source – Mapping the Measure of America 2010-2011

Health Means Wealth

Life Expectancy Correlates With Income Globally

Hans Rosling BBC 200 Countries, 200 Years in 4 Minutes

<http://www.youtube.com/watch?v=jbkSRLYSojo>